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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,200	03/11/2004	Naohiro Hirose	KOY-23	6190

20311 7590 10/13/2006

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EXAMINER	
DOTE, JANIS L	

ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/798,200	HIROSE ET AL.	
	Examiner	Art Unit	
	Janis L. Dote	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *12-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-20* are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/02/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-11, drawn to toners, classified in class 430, subclass 108.2.

II. Claims 12-20, drawn to image forming methods, classified in class 430, subclass 124.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the toner product as claimed can be used in a materially different process, such as a process comprising the steps of developing an electrostatic image on an electrostatic image bearing member with the toner to form a toner image and fixing the toner image directly on the electrostatic image bearing member. Such a process does not comprise the step of transferring the toner image to a recording material as required in the process of Group II.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art due to their recognized divergent subject matter, and in view of their different classification, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Mr. Timothy Meade (Reg. No. 55,449) on Oct. 4, 2006, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-11. Affirmation of this election must be made by applicants in replying to this Office action. Claims 12-20 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. The disclosure is objected to because of the following informalities:

The use of trademarks, e.g., Isoton [sic: ISOTON] at page 23, line 23, has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. This example is not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Appropriate correction is required.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f), or (g) prior art under 35 U.S.C. 103(a).

9. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by US 2002/0058193 A1 (Tosaka).

Tosaka discloses a toner comprising a monoazo pigment composition as the colorant and a binder resin. The toner comprises 11 ppm of the aromatic amine 3-amino-4-methoxybenzanilide in the monoazo pigment composition in the toner. See paragraphs 0324-0333; Table 1-1, No. 1-2; Table 1-2, example 1-3; and reference claim 14, formula (3), where the groups R_{10}, R_{11}, and R_{12} are $-OCH_3$, -H, and $-CONHC_6H_5$,

respectively. The aromatic amine amount 11 ppm meets the amount range of "50 ppm or less in the toner" recited in instant claim 11. The toner is obtained by polymerization of radical polymerizable monomers in an aqueous medium, which meets the product-by process limitation recited in instant claim 11.

10. Claims 1-6 and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tosaka.

Tosaka discloses a toner as described in paragraph 9 above, which is incorporated herein by reference. The aromatic amine 3-amino-4-methoxybenzanilide meets the aromatic amine recited in instant claim 1. Tosaka further discloses that the R groups can equally be halogen, nitro, alkyl, or alkoxy, which meets the R group composition limitations recited in instant claim 6. Paragraphs 0051 and 0058, and reference claim 14. The aromatic amine amount of 11 ppm in the monoazo pigment composition in the toner meets the amount ranges of 50 ppm or less and 30 ppm or less in the toner recited in instant claim 1 and claims 2, 5, and 9, respectively. The toner is obtained by polymerization of radical polymerizable monomers in an aqueous medium, which meets the product-by process limitation recited in instant claims 1 and 2.

The Tosaka toner in production example 1-3 has a weight average particle size of 7.1 μm. Tosaka does not disclose that its toner has a volume average particle size as recited in instant claim 1. However, as discussed above, Tosaka reports that the toner in production example 1-3 has a weight average particle size 7.1 μm. The particle size value of 7.1 μm is within the numerical range of 3 to 8 μm recited in instant claim 1. Assuming that the density of an individual toner particle is independent of toner particle size, it is reasonable to conclude that the toner in example 1-3 of Tosaka has a volume average particle size of 7.1 μm. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Instant claim 4 is written in product-by-process format. Tosaka does not disclose that its toner is obtained "by fusing resin particles formed from radical-polymerizable monomer and particles of a coloring material in aqueous vehicle" as recited in instant claim 4. However, as discussed supra, the Tosaka toner meets the compositional limitations, the toner size limitation, and the product-by-process limitations recited in instant claim 1, from which claim 4 depends. Thus, it appears that the Tosaka toner is the same or substantially the same as the toner made by the process limitation recited in instant claim 4. The burden is on applicants to prove otherwise. In re Marosi, 218 USPQ 289 (Fed. Cir. 1983) and In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985). MPEP 2113.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tosaka.

Tosaka discloses a toner as described in paragraph 10 above, which is incorporated herein by reference.

As discussed in paragraph 10 above, the toner comprises 11 ppm of the aromatic amine 3-amino-4-methoxybenzanilide in the monoazo pigment composition in the toner. The amount of 11 ppm is outside the range of 10 ppm or less recited in instant claim 10.

According to Tosaka, when its monoazo pigment composition is used as the magenta colorant in a toner, the toner has excellent color reproducibility, gradation characteristic, light-fastness, and chargeability. Paragraph 0039. The toner has improved fixability. Paragraph 0078, line 2. Tosaka teaches that the content of the aromatic amine in the monoazo pigment in the toner is at most 200 ppm, preferably 10 to 50 ppm. The lower limit, 10 ppm, of the preferred range 10 to 50 ppm is within the range of "10 ppm or less" recited in instant claim 10. According to Tosaka, "[i]f the content of the aromatic amine exceeds 200 ppm, the chargeability and the transferability of the resultant toner are lowered, thus being liable to result in fog and soiling. It becomes difficult to achieve the matching with the image forming method."

Paragraph 0084. Thus, it appears that the prior art recognizes that the amount of the aromatic amine is a result-effective variable. The variation of a result-effective variable is presumably within the skill of the ordinary worker in the art.

Accordingly, it would have been obvious for a person having ordinary skill in the art, in view of the teachings of Tosaka, to vary, through routine experimentation, the amount of the aromatic amine in the monoazo pigment composition in example 1-2 and to use the resultant monoazo pigment composition in the toner in production example 1-3 of Tosaka, such that the amount of the aromatic amine in the monoazo pigment composition in the toner is 10 ppm. That person would have had a reasonable expectation of successfully obtaining a magenta toner that has the desired chargeability and transferability, so as to provide toner images with little, if any, image fogging and soiling, as taught by Tosaka.

12. Claims 1-11 over rejected under 35 U.S.C. 103(a) as being unpatentable over US 2002/019582 A1 (Yamazaki) combined with Tosaka.

Yamazaki discloses a toner comprising a binder resin and a colorant. The toner is obtained by fusing colorant particles and resin particles in an aqueous solution, where the resin

particles are formed by polymerizing a radical-polymerizable monomer in an aqueous solution. Paragraphs 0163-0182, and non-spherical particles 1 in Table 1. The toner has a volume average particle diameter of 6.5 μm, which is within the volume average particle diameter range of 3 to 8 μm recited in instant claim 1. The resin particles comprise resin particles A1 and resin particles B1. Resin particles A1 have a weight average molecular weight of 12,700, a glass transition point (Tg) of 57°C, and a softening point of 121°C. Paragraph 0173. Resin particles B1 have a weight average molecular weight of 245,000, a Tg of 58°C, and a softening point of 132°C. Paragraph 0179. The glass transition points of resin particles A1 and B1 meet the glass transition point range of 20 to 90°C recited in instant claim 8. The softening points of the resin particles A1 and B1 also meet the softening point range of 80 to 220°C recited in instant claim 8. The process of making the Yamazaki toner meets the process limitations recited in instant claims 1, 2, 4, and 11.

Yamazaki does not disclose that resin particles A1 and B1 have a peak in the molecular weight range of 1,000 to less than 20,000 and in the range of 100,000 to 1,000,000, respectively, as recited in instant claim 7. However, as discussed above, resin particles A1 and resin particles B1 have a weight average

molecular weight of 12,700 and 245,000, respectively, which are within the numerical ranges of 1,000 to less than 20,000 and 100,000 to 1,000,000, respectively. Thus, it is reasonable to presume that the resin particles A1 and the resin particles B1 have peaks within the molecular weight range of 1,000 to less than 20,000 and 100,000 to 1,000,000, respectively, as recited in instant claim 7. The burden is on applicants to prove otherwise. Fitzgerald, supra.

Yamazaki does not disclose that its toner comprises an aromatic amine in an amount as recited in the instant claims. However, Yamazaki does not limit the type of colorant used. Yamazaki teaches that the colorant can be "organic pigments which may be employed in toner may be employed." Paragraph 0086. Yamazaki further discloses that the colorant may be present in an amount of 2 to 20, preferably 3 to 15, parts by weight for a polymer. Paragraph 0090.

Tosaka discloses a monoazo pigment composition comprising a monoazo pigment of formula (1), a β-naphthol compound of formula (2), and an aromatic amine of formula (3), such as 3-amino-4-methoxybenzanilide. See paragraphs 0047 to 0058; for example, Table 1-1 at page 26, pigment composition No. 1-2; and reference claim 14, formula (3), where the groups R_{10}, R_{11}, and R_{12} are $-OCH_3$, -H, and $-CONHC_6H_5$, respectively. The aromatic

amine 3-amino-4-methoxybenzanilide meets the aromatic amine recited in instant claim 1. Tosaka further discloses that the R groups can equally be halogen, nitro, alkyl, or alkoxy, which meets the R group composition limitations recited in instant claim 6. Paragraphs 0051 and 0058, and reference claim 14.

Tosaka teaches that the content of the β-naphthol compound is from 500 to 50,000 ppm in the pigment composition in the toner. Tosaka further teaches that the content of the aromatic amine in the monoazo pigment in the toner is at most 200 ppm, preferably 10 to 50 ppm. Paragraphs 0082 and 0084. Tosaka exemplifies a toner comprising the pigment composition No. 1-2, where the aromatic amine is present in an amount of 11 ppm in the toner, which is within the amount ranges of 50 ppm or less and 30 ppm or less recited in instant claims 1 and 11 and in instant claims 3, 5, and 9, respectively. See Table 1-2, toner no. 1-3. The lower limit, 10 ppm, of the preferred range 10 to 50 ppm is within the range of "10 ppm or less" recited in instant claim 10. According to Tosaka, "[i]f the content of the aromatic amine exceeds 200 ppm, the chargeability and the transferability of the resultant toner are lowered, thus being liable to result in fog and soiling. It becomes difficult to achieve the matching with the image forming method." Paragraph 0084. Thus, it appears that the prior art recognizes

that the amount of the aromatic amine is a result-effective variable. The variation of a result-effective variable is presumably within the skill of the ordinary worker in the art.

Tosaka teaches that when its monoazo pigment composition is used as the magenta colorant in a toner, the toner has excellent color reproducibility, gradation characteristic, light-fastness, and chargeability. Paragraph 0039. The toner has improved fixability. Paragraph 0078, line 2. Tosaka reports that the exemplified toner no. 1-3 provides fixed color images with no observable image soiling and with little, if any, image fog. Table 1-3 at page 27, toner no. 1-3 and the accompanying text.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Yamazaki and Tosaka, to incorporate the Tosaka monoazo pigment composition as the colorant in the toner disclosed by Yamazaki, such that the amount of the aromatic amine in the pigment composition in the toner is 10 to 50 ppm as taught by Tosaka. That person would have had a reasonable expectation of successfully obtaining a magenta toner having the benefits taught by Tosaka.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Janis L. Dote
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PRIMARY EXAMINER
GROUP 1500 1700

JLD
Oct. 7, 2006